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(54) FINELY PARTICULATE FUNCTIONAL METAL AND FINELY PARTICULATE FUNCTIONAL SEMICONDUCTOR EACH WITH DISPERSION STABILITY AND PROCESS FOR PRODUCING THE SAME

(71) JAPAN SCIENCE AND TECHNOLOGY CORPORATION [JP/JP]; 1-8, Hon-cho 4-chome, Kawaguchi-shi, Saitama-ken 332-0012 (JP).

(71) 科学技術振興事業団 (JAPAN SCIENCE AND TECHNOLOGY CORPORATION) [JP/JP]; 〒332-0012 埼玉県川口市本町4丁目1番8号 Saitama (JP).

(72) KATAOKA, Kazunori [JP/JP]; 5-17-22, Kamisaginomiya, Nakano-ku, Tokyo

(75) 165-0031 (JP). NAGASAKI, Yukio [JP/JP]; 3-5-17, Keyakidai, Moriya-mati, Kitasouma-gun, Ibaraki-ken 302-0128 (JP). OTSUKA, Hidenori [JP/JP]; 11-13, Idanakanomati, Nakahara-ku, Kawasaki-shi, Kanagawa-ken 211-0034 (JP). ISHII, Takehiko [JP/JP]; 1221-1, Ueuchi, Washimija-mati, Kitakatashika-gun, Saitama-ken 340-0211 (JP).

(72) 片岡一則 (KATAOKA, Kazunori) [JP/JP]; 〒165-0031 東京都中野区上鷺

(75) 宮5-17-22 Tokyo (JP). 長崎幸夫 (NAGASAKI, Yukio) [JP/JP]; 〒302-0128 茨城県北相馬郡守谷町けやき台3-5-17 Ibaraki (JP). 大塚英典 (OTSUKA, Hidenori) [JP/JP]; 〒211-0034 神奈川県川崎市中原区井田中ノ町11-13 Kanagawa (JP). 石井武彦 (ISHII, Takehiko) [JP/JP]; 〒340-0211 埼玉県北葛飾郡鷺宮町上内1221-1 Saitama (JP).

(74) MIYAMOTO, Harumi; Hougaku Building 7F, 19-14, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 (JP).

(74) 弁理士 宮本晴視(MIYAMOTO, Harumi); 〒105-0001 東京都港区虎ノ門一丁目19番14号 邦楽ビル7階 Tokyo (JP).

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(84) European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR)

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(57) A stable dispersion of fine metal particles which is obtained by reducing with a reducing agent a haloauric acid, a haloplatinic acid, silver nitrate, and a halorhodic acid in an aqueous solution of (1) R-PEG-SX [wherein R is acetal, aldehyde, hydroxy, amino, carboxyl, active ester, azido, biotin, monosaccharide, oligosaccharide, amino acid, nucleic acid, allyl, vinylbenzyl, methacryloxy, and acryloxy groups; PEG is $(CH_2CH_2O)_n$; and X is hydrogen or pyridylthio] or (2) R-PEG/PAMA (given structural formula (A)) to thereby form metal particles having deposited on the surface thereof a polymer having PEG units having the functional groups.



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(71) 出願人(米国を除く全ての指定国について): 科学技術振興事業団 (JAPAN SCIENCE AND TECHNOLOGY CORPORATION) [JP/JP]; 〒332-0012 埼玉県川口市本町4丁目1番8号 Saitama (JP).

(72) 発明者; および

(75) 発明者/出願人(米国についてのみ): 片岡一則 (KATAOKA, Kazunori) [JP/JP]; 〒165-0031 東京都中野区上鶴宮5-17-22 Tokyo (JP). 長崎幸夫 (NAGASAKI, Yukio) [JP/JP]; 〒302-0128 茨城県北相馬郡守谷町けやき台3-5-17 Ibaraki (JP). 大塚英典 (OTSUKA, Hidenori) [JP/JP]; 〒211-0034 神奈川県川崎市中原区井田中ノ町11-13 Kanagawa (JP). 石井武彦 (ISHII, Takehiko) [JP/JP]; 〒340-0211 埼玉県北葛飾郡鶯宮町上内1221-1 Saitama (JP).

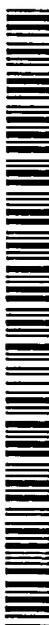
(74) 代理人: 弁理士 宮本晴視 (MIYAMOTO, Harumi); 〒105-0001 東京都港区虎ノ門一丁目19番14号 邦楽ビル7階 Tokyo (JP).

(81) 指定国(国内): US.

(84) 指定国(広域): ヨーロッパ特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

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A1

(54) Title: FINELY PARTICULATE FUNCTIONAL METAL AND FINELY PARTICULATE FUNCTIONAL SEMICONDUCTOR EACH WITH DISPERSION STABILITY AND PROCESS FOR PRODUCING THE SAME

WO 02/20200

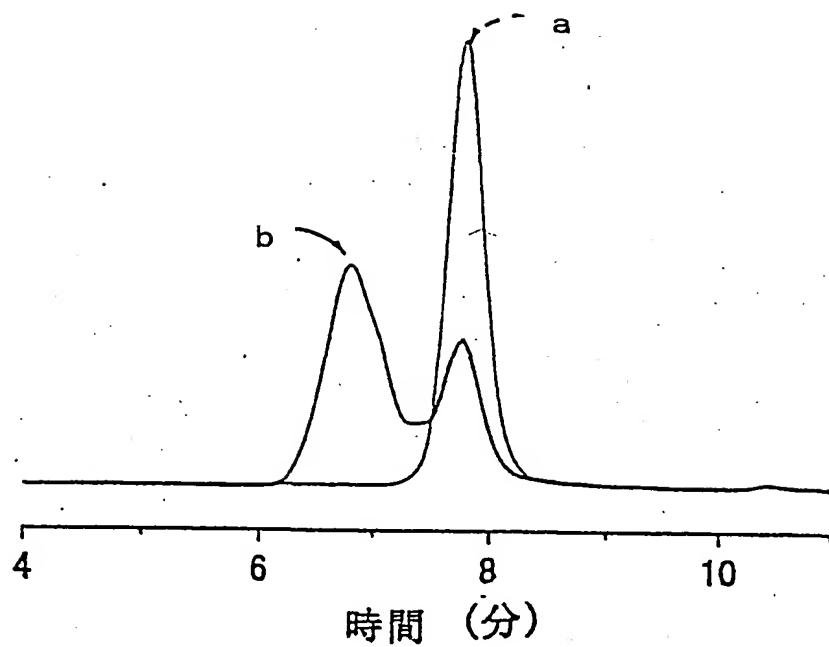
(54) 発明の名称: 分散安定化機能性金属微粒子及び半導体微粒子およびその製造法

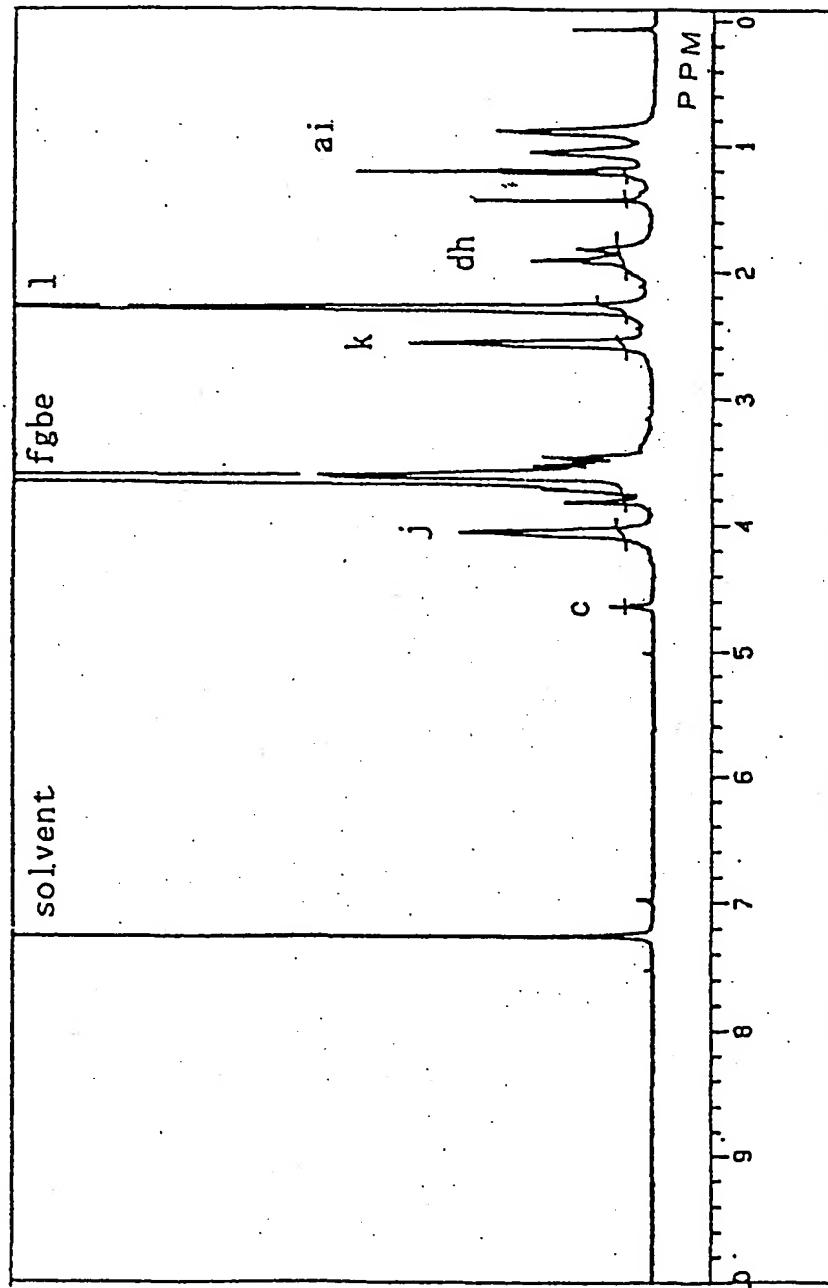
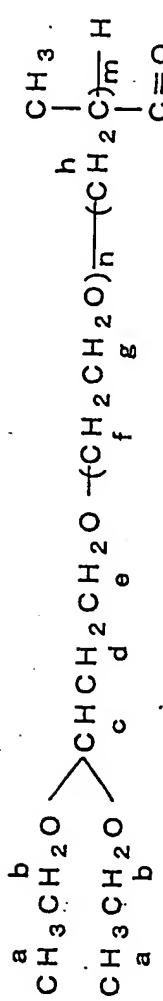
(57) Abstract: A stable dispersion of fine metal particles which is obtained by reducing with a reducing agent a haloauric acid, a haloplatinic acid, silver nitrate, and a halorhodic acid in an aqueous solution of (1) R-PEG-SX [wherein R is acetal, aldehyde, hydroxy, amino, carboxyl, active ester, azido, biotin, monosaccharide, oligosaccharide, amino acid, nucleic acid, allyl, vinylbenzyl, methacryloxy, and acryloxy groups; PEG is $(CH_2CH_2O)_n$; and X is hydrogen or pyridylthio] or (2) R-PEG/PAMA (given structural formula (A)) to thereby form metal particles having deposited on the surface thereof a polymer having PEG units having the functional groups.

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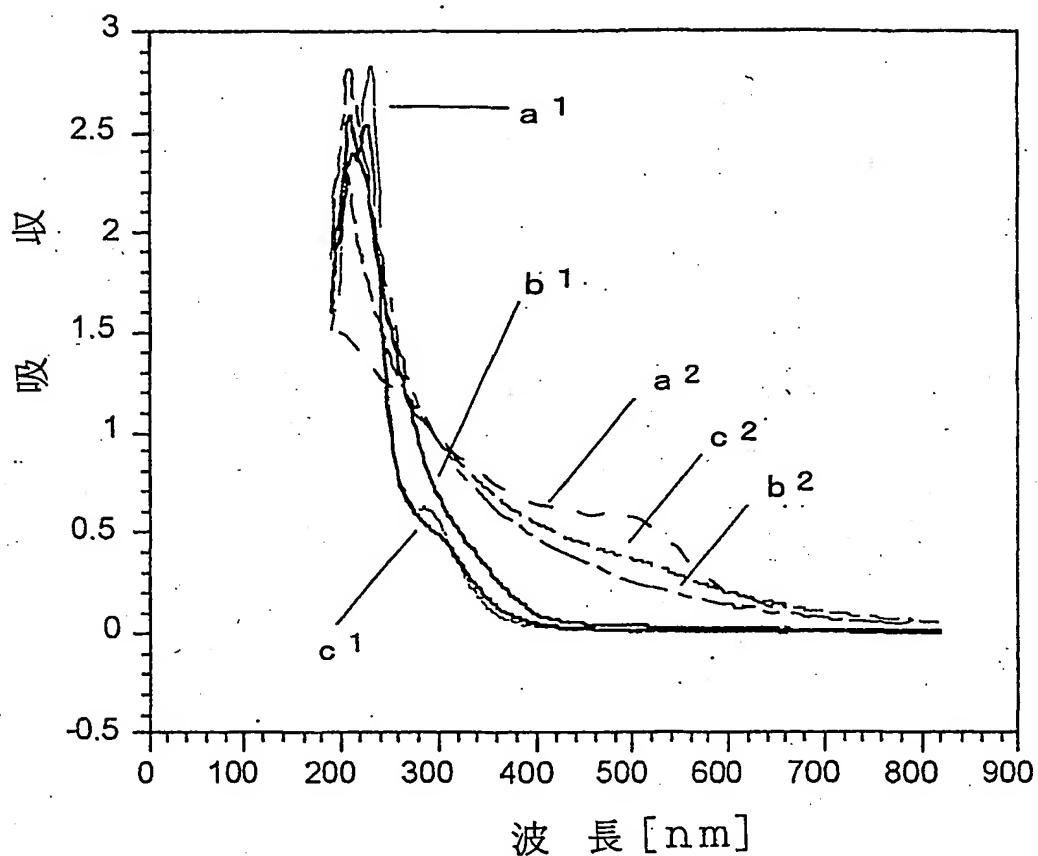
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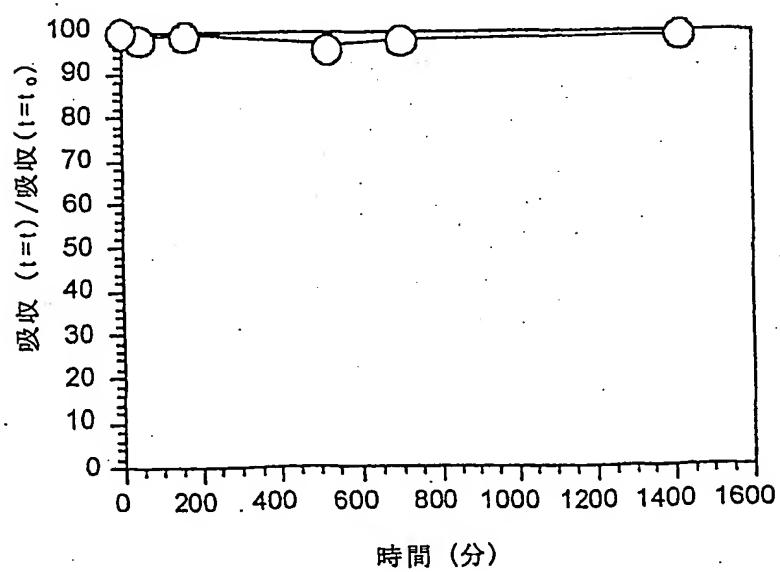
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第2図

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第3図

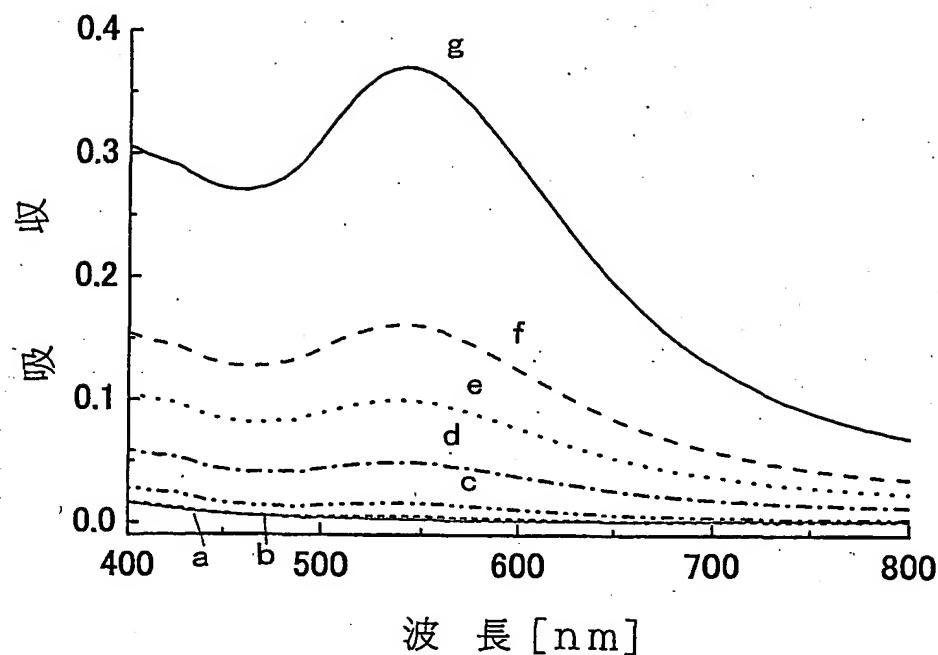


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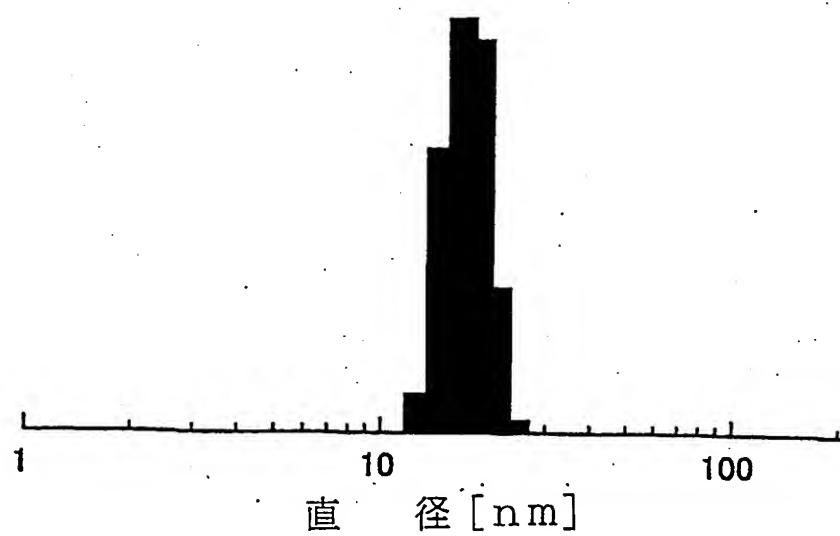


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第5図



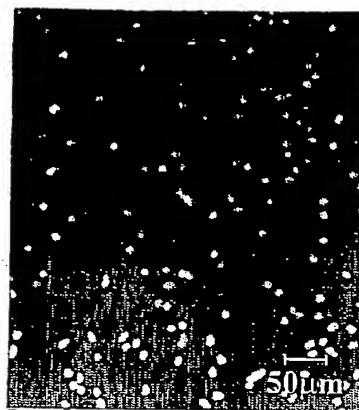
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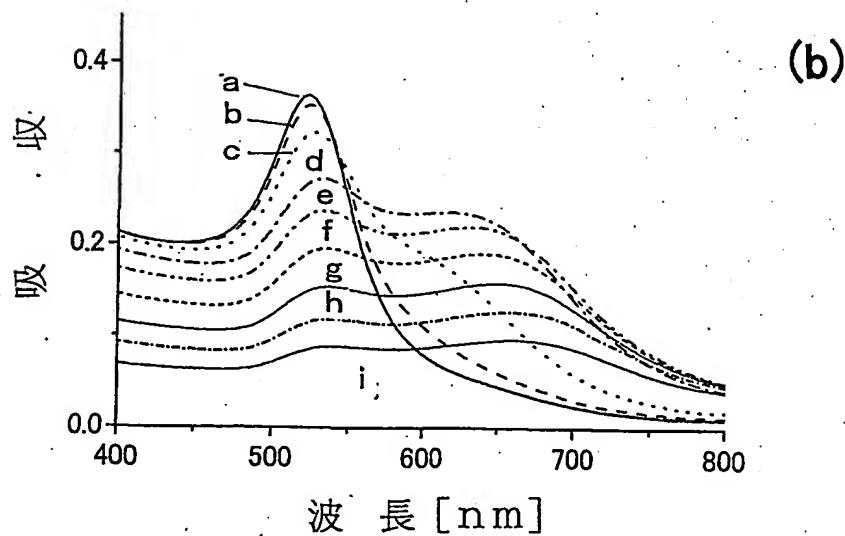
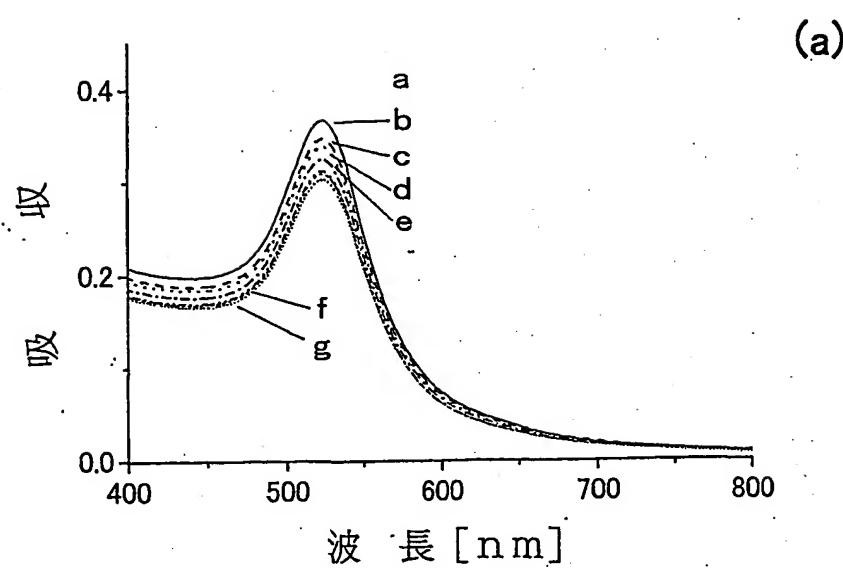
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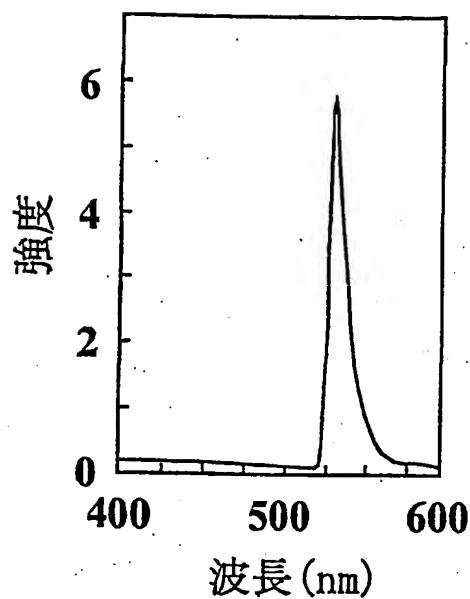
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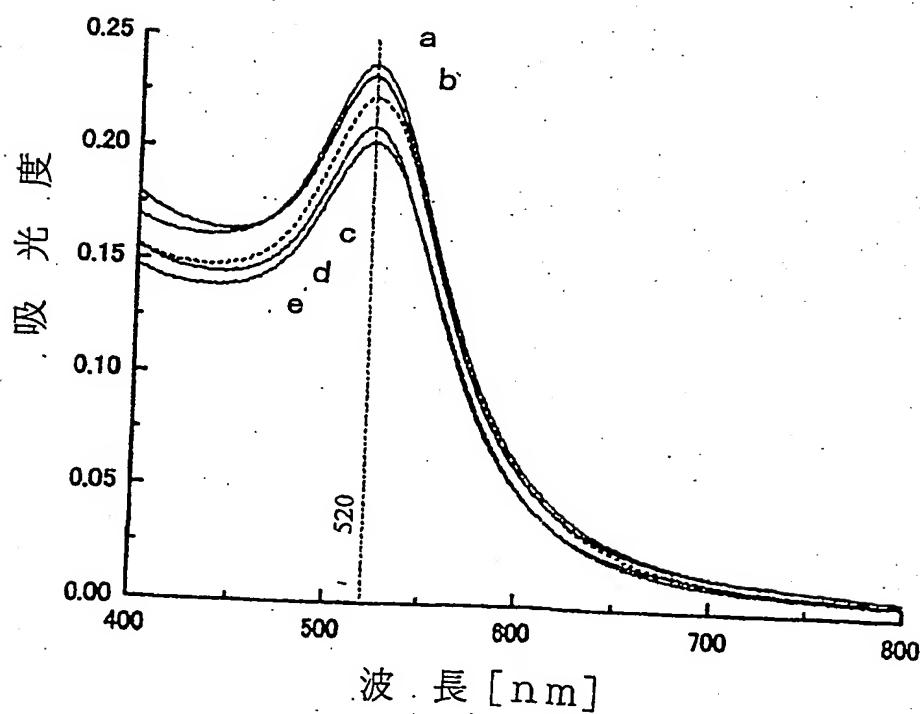


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第9図



第10図



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第11図

